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AVIATION MATERIEL COMBAT READY IN-COUNTRY (AMCRIC).(U)
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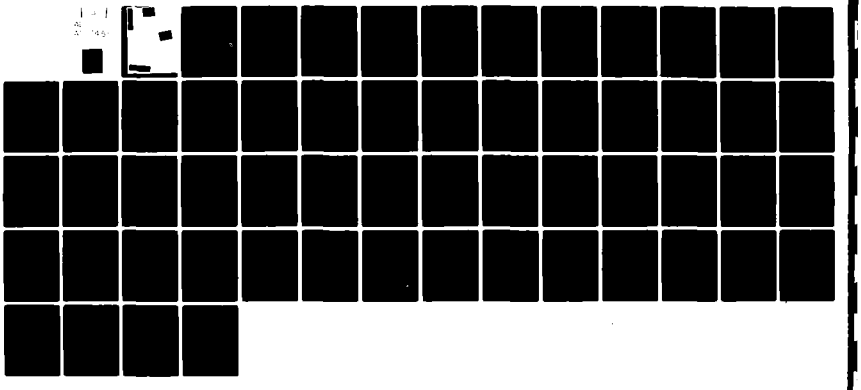

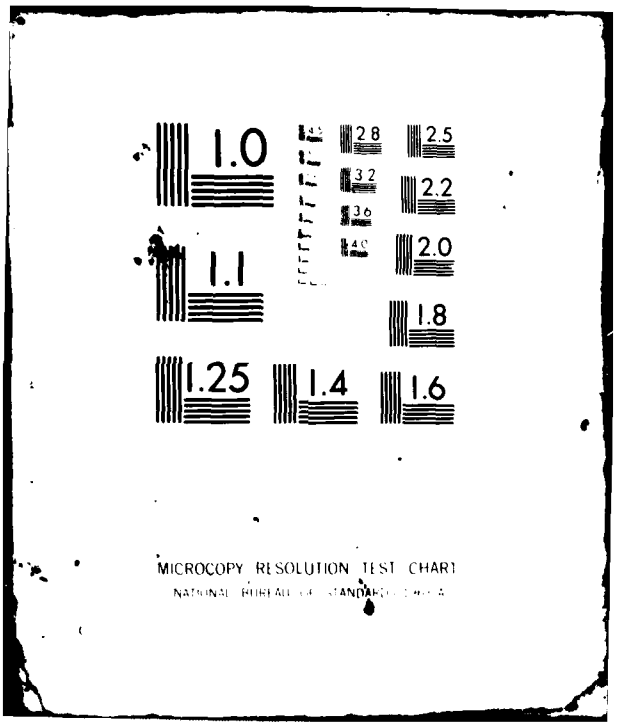
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MICROCOPY RESOLUTION TEST CHART

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ACKNOWLEDGEMENT

This project was performed by Mr. H. M. Orrell, USALEA; Mr. Marshall Levitan, USALEA; and Mr. Val Berger, TSARCOM.

Sincere appreciation is expressed to the following personnel who have materially assisted in completing the project.

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FORSCOM	Mr. Bill Shook
USAREUR	COL C. Harmon MAJ Whitacre Mr. Erickson Mr. Solonch
AVCO Lycoming	Mr. Luce Mr. Wilkie
Vought Corp	Mr. Carter Mr. Kaufman
US Navy	Mr. Spriull Mr. Arnold
Royal Australian Air Force	Squadron Leader Hingston
Global Chemical Co.	Mr. Atwood

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The purpose was to determine the best method to forward deploy, maintain and have ready for use, aviation assets belonging to CONUS early deploying forces reinforcing NATO. This report discusses actions taken and decisions reached in establishing the concept POMCUS for Army Aviation to be implemented on test bed basis in USAREUR during FY 1982.

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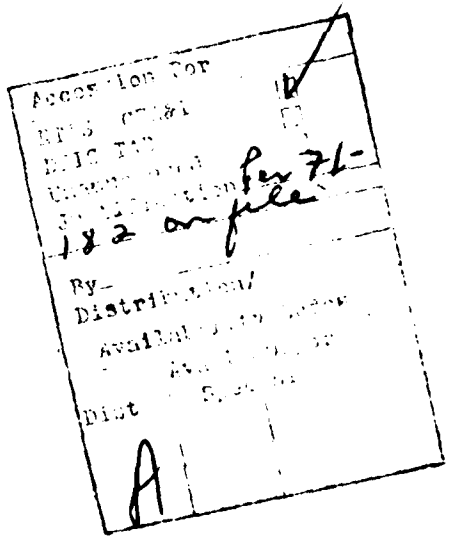


EXECUTIVE SUMMARY

HQDA, Office of the Deputy Chief of Staff for Logistics, DALO-AV, furnished USALEA a TSARCOM study titled Aviation Materiel Combat Ready In-Country (AMCRIC) as a basis to develop a concept to preposition Army aircraft in US Army Europe. This study recognized that aircraft are not authorized as war reserve, and that no aircraft are currently included in POMCUS in Europe. To adequately reinforce NATO, some method had to be devised to allow Army aircraft to be immediately available to a deploying combat force.

The project considered the following:

a. Methods available to accomplish prepositioning of Army helicopters and ancillary systems;

b. South Vietnam Army aviation experience in combat;

c. State-of-the-art storage methods by US Government, foreign governments, and commercial contractors;

d. Major command interfaces within the US Army that will be required to establish a workable concept.

The project results were:

a. US Army has the capability to store helicopters for short periods using on-hand resources.

b. The Vice Chief of Staff, Army, approved a prepositioning concept developed which will store helicopters in USAREUR on a test bed basis using AH-1S helicopters.

CHAPTER 1

GENERAL

1-1. PURPOSE. Determine the best method to forward deploy, maintain, and have ready for use aviation assets belonging to CONUS early deploying forces reinforcing NATO.

1-2. BACKGROUND.

a. Department of Defense Guidance for FY 82-86 suggested that the Army should seek ways to minimize early airlift demands that will be required to rapidly reinforce NATO. Coupled with this guidance, in December 1979 CINCUSAREUR recognized a critical need for aviation assets to support forces deploying to POMCUS and suggested methods to preposition aviation assets.

b. In 1978, TSARCOM, having recognized this problem, began the Aviation Materiel Combat Ready In-Country (AMCRIC) study. The detailed study plan was forwarded to DARCOM and reviewed by an ad hoc work group. The study plan was also reviewed by ODCSLOG, DALO-AV, who encouraged active pursuit of the study. The AMCRIC study plan and TSARCOM letter forwarding the study plan are attached at appendix A.

c. In February 1979 the AMCRIC study plan was staffed at DARCOM and forwarded to DA, Deputy Chief of Staff for Operations and Plans, General Officer Steering Committee which was studying the rapid reinforcement of NATO. DARCOM considered the project to have merit, but felt that the scope was outside of its capabilities. The DARCOM letter forwarding the study plan and notification to TSARCOM of action taken are attached at appendix B.

d. During 1979, the AMCRIC study plan was held without action. Due to CINCUSAREUR's continued request for aviation assets to support POMCUS, DA ODCSLOG, DALO-AV, tasked USALEA to develop a concept for prepositioning aircraft in Europe considering current options available. This tasking and USALEA's project plan are attached as appendix C.

1-3. SCOPE.

a. To initiate this project, an ad hoc work group (AHWG) meeting was held in Washington at HQDA. The results of this meeting and subsequent staffing at DA DCSLOG, DALO-AV, were that--

(1) Prepositioned aircraft needs would be determined by considering POMCUS units that are required to airlift aircraft in order to achieve a balanced combined arms team.

(2) Current recommended alternatives as stated in chapter 2 would be evaluated to determine the most feasible.

(3) Aircraft scheduled to support the rapid deloyment force would not be considered. Units selected for multiple contingencies would not be available for this project.

(4) Communications with USAREUR would emphasize that there would be no increase in total flying hours and that the impact on peacetime operations would be minimized.

(5) Maintenance float would not be a viable alternative for use under the current definition provided in AR 750-1.

(6) The AHWG findings and the project point of contact would be reported to CINCUSAREUR.

(7) Mr. Val Berger, TSARCOM representative to the AHWG, would be assigned as a co-worker to the USALEA project.

b. South Vietnam Army aviation operations data was obtained from TSARCOM and applied to the basic prepositioning alternative outlined in the AMCRIC study plan. In 1966, additional airframes were added to operational Army aviation units without increasing the equivalent support resources. USALEA operations research personnel analyzed this data and determined that certain increases can be made under such circumstances without causing deterioration to unit readiness. Appendix D is a graphic summary of the overall effect on unit maintenance which was considered a critical parameter.

c. Extensive research was accomplished to determine the current state-of-the-art involved with storage of aircraft and helicopters. Numerous studies and current operational information on aircraft storage procedures now in use are discussed in chapter 3.

d. Surveys and briefings at the three MACOMs involved were held during May through August 1980 to enable the team to achieve a workable concept that would be acceptable to all parties. This concept was developed and is discussed in chapters 4 and 5.

e. Classified information used in conducting this project is maintained at USALEA (DALO-LEP) and is available by request to Commander, USALEA, New Cumberland Army Depot, New Cumberland, PA 17070.

CHAPTER 2

AVIATION PREPOSITIONING ALTERNATIVES

2-1. PURPOSE. To determine the most feasible prepositioning alternative for Army helicopters in USAREUR, several methods were selected for analysis. The methods selected were considered to be the best to preposition aircraft as soon as possible with minimum resources required.

2-2. ALTERNATIVES ANALYZED.

a. Helicopter self-deployment. Three Army helicopters in the inventory or soon to be in the inventory (CH-47, UH-60, and AH-64) are capable of self-deployment using kits that have been or are being procured. Only the CH-47 has demonstrated a self-deployment capability. This was done across the North Atlantic Ocean to USAREUR in 1979. The many pros and cons of self-deployment as a NATO reinforcing alternative are being studied separately by a DA steering group. (A USALEA representative is a member of this steering group.) The other helicopters that had to be considered for prepositioning (OH-58, UH-1, AH-1H) do not now have nor is it planned to enhance their capability to allow self-deployment. In the near term, self-deployment is considered only as an emergency and does not solve the prepositioning problem.

b. Storage in active US Army Europe aviation units. This alternative was the primary thrust of the TSARCOM AMCRIC study plan. This alternative had to be supported by a storage system that uses some type of individual shelter or an easily constructed portable shelter that would house more than one helicopter. Research conducted on available storage systems revealed that there was one Army system available owned in sufficient quantity to support the initial storage requirement. This system called "Redi-cover" is a product of a US manufacturer and is an individual shelter made to be used with an external dehumidification machine. A detailed description of this system is contained in appendix E. Table 2-1 provides asset information on the Redi-cover helicopter storage system. Table 2-2 provides details on support equipment necessary to use the Redi-cover. Use of this system has been highly successful and is discussed further in chapter 3. The "Redi-cover" system was determined to be more cost-effective than portable type storage buildings. It was also determined that the Redi-cover performed well when employed as a shipping device. Appendix F contains a logistics assistance special report on the application of the Redi-cover as a shipping device. However, application of this concept to the current scenario in USAREUR was found to be unacceptable. During the field survey to USAREUR, two problems existed that prohibited use of individual shelters at unit airfields. They were--

(1) Inadequate ramp space for parking additional helicopters.

(2) Operational units could not be relied on to maintain CONUS assets under peacetime conditions flyable without an extensive inspection control system which is not within their capability. At the outset, this was considered the most viable option because helicopters are not procured for war reserves; hence, any prepositioned aviation assets had to be derived from CONUS aviation units. Considering the problems identified in USAREUR aviation units, no additional analysis was done to determine the best operational procedures for aircraft if assigned as additional assets without equivalent resources.

c. Storage in POMCUS. This alternative was not initially thought to be feasible due to the length of time that POMCUS equipment is now stored. However, existing technical data on various types of controlled humidity storage indicates that if helicopters are not stored beyond 6 months, no deterioration is expected. During the USAREUR survey, POMCUS sites were visited and it was determined that under modified procedures this alternative might be a viable storage concept.

d. Increased maintenance float. This alternative was considered and discarded early because of the prohibition against procuring aircraft for war reserves. Attrition and float that is now authorized will be continued to be assigned as the situation dictates in quantities that meet current projections and authorizations.

e. Sealift and airlift. Both alternatives are viable; however, quantities of helicopters that can be airlifted depend directly on the number of strategic airlift aircraft available when the requirement for lift exists. Likewise, quantities to be sealifted will depend on ship availability. Further, sealift cannot meet the required delivery date of the helicopters in Europe. Guaranteed availability of strategic airlift would negate any requirement to preposition aircraft.

TABLE 2-1

HELICOPTER STORAGE COVER INFORMATION

"REDI-COVERS"

Aircraft Type	NSN	Quantity On Hand[1]	Location	Acquisition Cost
AH-1	1730-01-005-1719	149	NCAD	1759
CH-47	1730-01-138-5338	101	NCAD RRAD[2]	3999
OH-58	1730-00-624-0730	82	RRAD	1714
UH-1H	1730-00-217-6622 1730-00-138-5337[3]	201	NCAD RRAD[4]	2000

1 Data as of 16 May 80
2 98 NCAD 3 RRAD
3 Two types, one stores with blades on, one stores without blades
4 NCAD 17, RRAD 184

TABLE 2-2

SUPPORT EQUIPMENT FOR REDI-COVERS

Noun	NSN	Part No.	Quantity *Required* Per Cover
Dehumidifier	4440-00-376-1570	SOR8NA1	1
Hose, Air Duct	4720-00-623-7429	SPIRATUBE D31N1D	2
Control, Humidity	6685-00-885-0640	HC101-0-1	1

CHAPTER 3

TECHNICAL DATA

3-1. PURPOSE. To ensure that storage equipment currently available is technically capable of providing adequate protection for helicopters in short term or long term storage, a survey was made among US Armed Forces, foreign governments, and commercial practices. It was learned that both short and long term storage of helicopters, aircraft, and ancillary systems is being done on a worldwide basis. Extensive information on such storage systems was found to be available. Thus, the testing forecasted in the original AMCRIC study plan was deemed to be no longer required and no further test of the technical capabilities was done. To support this theorem, a series of recorded tests and facts concerning current storage techniques are furnished below.

3-2. TECHNICAL REPORTS/FACTS.

a. "Report by the technical office intra-structure, French Ministry of Defense, on the protection of aircraft against corrosion and the realization of controlled hygrometry inclosures, December 1976." This report provides information on a system used by the French Air Force that shelters up to 200 fighter aircraft in four large airtight inclosures that maintain the relative humidity at 40 percent plus or minus 5 percent. Use began in 1973 with several expansions since that time. The system basically involves the use of very large polyvinyl chloride (PVC) fabric structures with airtight doors that allow personnel access to the aircraft. This has enabled the French to increase longevity of their operational fighter aircraft without large expenditure of funds and deterioration to their aircraft.

b. "DRICLAD helicopter storage system test report, test number FM251, 19 July 1974," by modern Army Selected Systems, Tests, Evaluation, and Review, Fort Hood, TX. This report provides information on the tests of a plastic cover manufacturered in sections for the purpose of storing one aircraft or helicopter using a dehumidifier inside each cover to maintain relative humidity at no greater than 50 percent. This report had several problems mostly related to maintaining the integrity of the various sections as a whole so that the dehumidifer would work effectively. When the system was intact, it was capable of maintaining the helicopter (UH-1H) in storage without deterioration with one exception. The exception was leakage of the rotor head grip seal that occurs when the rotor is in a static position. This is a known problem to the UH-1H whether stored or in normal operations.

c. "One piece polyurethane (UH-1-D/H helicopter system), 6 January 1976, Master test report number FM307." This report covers the use of the one piece polyurethane cover manufactured by Global Chemical Company under the trade name Redi-cover. Global has been making this type material since 1965. The test successfully proved that storage of helicopters for a 90-day period using external attached dehumidifying machines to control humidity inside of the cover was technically feasible. The major problems involved were maintenance of the fastening devices used to close the one piece cover, maintaining the correct humidity as a result of cover openings, and considerable maintenance involving dehumidifying machines and their ancillary equipment. This test was followed by the use of several of the same type covers and dehumidifying machines on UH-1H's at Corpus Christi Army Depot for a 6-month period. No major deterioration was noted upon removal of the covers.

d. "Technical report model H46 storage cover test, NESO North Island, September 1976 through September 1978, dated 24 April 1979." This report provides information on a head-to-head test using CH-46 helicopters with three storage systems:

(1) MIL-C-6799 cocoon system.

(2) Global Chemical Company Redi-covers.

(3) The DRICLAD system.

Similar results were obtained as has been explained with the two previous tests using DRICLAD and Redi-covers. The use of the cocoon was acceptable; however, the removal process of the cocoon is extremely difficult and not recommended if the reusable cover concept is acceptable. In this test, reusable covers were found to be comparable with cocoon as long as structural integrity of the removable cover was maintained and the humidifying system performed correctly. No major problems concerning deterioration of the aircraft existed. This test did emphasize that more research and development was needed to make the covers a truly reusable cover as the manufacturers now claim. Further tests have been run on modified Global Chemical Company covers used on F-14 fighter aircraft by the US Navy. This testing began in 1980 and results are not available at this time. An evaluation of the Global Chemical Company's latest materiel (film number 8220) was completed by the Naval Air Development Center, Aircraft and Crew Systems Technology Directorate, Warminster, PA 18974, on 18 December 1980. Conclusions and recommendations are included in Appendix G. It is significant to note here that film number 8220 was found to be usable for maximum of 1 year unless actual usage indicates a longer or shorter period.

e. Storage of Royal Australian Air Force (RAAF) Chinook (CH-47) helicopters, 18 November 1980. This is not a report of test, but facts and specific instructions used by the RAAF in storing five CH-47 helicopters in Australia for a 3-year period. The RAAF is using the DRICLAD system and considers the operation extremely successful. They are continuing the operation with some modifications to the DRICLAD closure system to improve its maintaining integrity during the storage period. Some minor corrosion has been found on air frames, but is considered to be the result of faulty cover fastening.

3-3. SUMMARY OF TESTS AND WORLDWIDE USAGE. Based on these studies, other information, and actual experience, it was determined early that storage of aircraft for a 6-month period does not constitute a technical problem as long as the humidity is maintained below the 50 percent level.

CHAPTER 4

MACOM REQUIREMENTS TO SUPPORT AMCRIC

4-1. PURPOSE. Recognizing that adequate storage systems exist for helicopters, the task of the AMCRIC team became one of defining how the MACOMs involved could in fact preposition aircraft under a modified POMCUS procedure (detailed in chapter 5). The projected missions for the MACOMs are detailed below.

4-2. USAREUR PROJECTED MISSIONS (missions to be executed by Combat Equipment Group Europe (CEGE) and aviation units that are assigned the aircraft at storage sites).

a. CEGE receives, issues, and stores helicopters either using Redi-covers or controlled humidity warehouses.

b. CEGE maintains storage devices if the Redi-cover system is used.

c. CEGE maintains accountability and aircraft records while aircraft are in their custody.

d. CEGE provides required status reports to owning units during peacetime operations.

e. CEGE provides quality assurance services for input and output of aircraft from storage.

f. CEGE provides appropriate security and housing and messing facilities for aviation crews picking up aircraft from storage.

g. CEGE provides for aircraft maintenance services when required.

h. CEGE coordinates utilization of aircraft by FORSCOM units during peacetime operations when FORSCOM units deploy to USAREUR for exercises.

i. CEGE positions and maintains the PLL/ASL.

j. CEGE assures rotation of each stored aircraft once during every 6 month period.

k. USAREUR aviation units assigned aircraft in storage participate directly with CEGE to assure the rotation of aircraft every 6 months.

4-3. FORSCOM PROJECTED MISSIONS.

a. FORSCOM coordinates exercise use of aircraft with USAREUR headquarters.

b. FORSCOM provides the initial increment of helicopters to be placed in POMCUS. It is envisioned that no more than 21 AH-1S will be considered for the first increment of helicopters to be stored using the concept discussed in chapter 5.

c. FORSCOM participates directly with CEGE to develop PLL and ASL that will be the responsibility of CEGE. FORSCOM will develop a memorandum of understanding with HQ USAREUR to cover reporting procedures, maneuver exercises, and an overall plan of operations for the aircraft that are placed in POMCUS.

4-4. DARCOM PROJECTED MISSIONS.

a. DARCOM insures that Redi-covers if used, will fit the AH-1S now in Europe and the AH-1S modernized to be delivered to Europe.

b. DARCOM provides the storage covers and dehumidifying machines for 21 AH-1S aircraft if used by USAREUR to store aircraft at POMCUS sites.

c. DARCOM provides technical assistance, depot maintenance if required, and quality assurance support for depot modification work orders.

d. DARCOM plans to integrate Aviation Classification Repair Activity Depots (AVCRAD) into the support role for the storage of aircraft in POMCUS when it is feasible to do so.

CHAPTER 5

POMCUS FOR ARMY AVIATION

5-1. PURPOSE. As a result of demonstrated capability for storage of aircraft in controlled humidity shelters for a 6-month period without further testing and a basic agreement between HQ USAREUR and HQ FORSCOM, action was taken to obtain concept approval for prepositioning aviation assets in POMCUS type storage in USAREUR.

5-2. APPROVED CONCEPT. In December 1980, the Vice Chief of Staff, Army approved on a test bed basis the necessary programing and limited execution of POMCUS for Army aviation as described in appendix H.

a. Combat ready helicopters and ancillary equipment will be stored by the CEGE in a humidity controlled environment using controlled humidity warehouses or controlled humidity individual aircraft covers.

b. Helicopters will be rotated every 6 months by serial number to designated sponsors among aviation units stationed in Europe, and will be replaced in storage as fully mission capable helicopters on a one-for-one basis.

c. Priority is planned to be given to those aircraft that are not self-deployable (AH-1S, OH-58, and UH-1). However, aircraft that are capable of self-deployment such as the CH-47 and the UH-60 will not be excluded if it is found that prepositioning of these aircraft is needed and feasible.

d. The first phase will place a maximum of 21 AH-1S helicopters in storage. The plan is to use 21 modified AH-1S helicopters now assigned to USAREUR that are scheduled to be replaced by fully modernized new production AH-1Ss. This phase will be considered the test bed to iron out problems and work out any foreseen requirements prior to prepositioning a complete attack helicopter company.

5-3. CONCLUSIONS. As a result of concept approval, the following actions have occurred:

a. HQ USAREUR has accepted the concept and outlined tasks required to complete first prepositioning (message, appendix I).

b. HQDA (DALO-AV) has provided quidance to participating MACOMs to begin implementation of the concept (message, appendix J).

c. Resource requirements to support first prepositioning have been determined by USAREUR and DARCOM and are being staffed at HQDA.

d. Plans are being made under the direction of the COBRA Program Manager, TSARCOM, to preposition AH-1S aircraft during FY 82.

APPENDIX A

DEPARTMENT OF THE ARMY
HQ, US ARMY TROOP SUPPORT & AVIATION MATERIEL READINESS COMMAND
4300 GOODFELLOW BOULEVARD, ST. LOUIS, MO 63120

17 OCT 1978

DRSTS-G

SUBJECT: Aviation Materiel Combat Ready In Country (AMCRIC) Study

HQDA (DALO-AV/Mr. Cribbins) TPL-730278
The Pentagon
Washington, DC 20310

1. Reference letter, DALO-AV, HQ DA, dated 25 September 1978, subject: Aviation Materiel Combat Ready In Country (AMCRIC) Study.

2. We have incorporated the guidance which you provided in your referenced letter into a Draft Plan of Action (Inclosure 1), which will be staffed within the US Army Troop Support and Aviation Materiel Readiness Command (TSARCOM) by 27 October 1978.

3. We would appreciate the participation of your office in the AMCRIC Study Advisory Group (SAG). Mr. V. Berger, the TSARCOM Project Officer for AMCRIC, will contact LTC Thompson to arrange for a meeting in Washington, D. C., to prepare a realistic schedule for study activities, and to determine the composition of an effective Study Advisory Group. I believe that such a meeting would be most beneficial following completion of TSARCOM staffing of the inclosed Draft Plan of Action.

1 Incl
as

RICHARD H. THOMPSON
Major General, USA
Commanding

6 OCT 1978

DRAFT

PLAN OF ACTION

1.0 Subject of Project/Study

Aviation Materiel Combat Ready In Country (AMCRIC)

2.0 Study Type

Operation Research

3.0 Project Origin/Application

a. Systems Analysis Office Project, July 1977

b. Study results to be furnished to Department of the Army via DARCOM, for use in deploying and in operating Army aircraft.

4.0 Project Definition Target Date: 15 November 1978

5.0 Project Definition and Rationale

a. General Statement of the Problem:

At this time U. S. Army aviation is deployed both in CONUS, as well as in proximity of potential armed conflict areas OCONUS. Aviation assets located in CONUS are integrated into large combined arms Army units which are trained and organized for full-scale deployment to specific OCONUS conflict areas, notably to Germany. Substantial hardware assets owned by the CONUS-located divisions are currently prepositioned in Europe in unit-sized materiel complements (POMCUS). Aircraft, however, are not included at this time in POMCUS storage. On a yearly basis, major exercises test the ability of CONUS units to bridge the Atlantic, to take possession of their prepositioned equipment, and to reform themselves into a fighting force capable of integration with NATO military elements deployed on the Continent. During the course of these "REFORGER" exercises, CONUS-based aviation units partially

Encl 1

dismantle their system, prepare them for sea transportation, and, upon their arrival in European ports, reassemble, test, and operate their aircraft in concert with Army aviation units already deployed in-country. The current status sketched above indicates that full-scale Army response in the European theater is substantially dependent upon the transfer of men and materiel positioned in CONUS with sufficient speed to join OCONUS forces and stored materiel before they are captured or destroyed in place.

A second component of the problem addressed by this project is that of aviation materiel readiness. At this time, the operational readiness (OR) rates tracked by the Army apply exclusively to end-item aircraft, reflect cumulative end-item availability, have remained unchanged over long periods of time, and are undifferentiated in CONUS and OCONUS. In parallel with the computation of OR rates, unit readiness rates are measured per AR 220-1 in relation to the availability/non-availability of aviation weapon systems for specific military missions assigned in the field on the twentieth day of each month. Inasmuch as mission-essential systems (weapons, communication devices, electronic detection and targeting equipment, etc.) have OR and "instantaneous" readiness rates of their own, it is evident that the mission readiness of complex integrated aviation weapon systems will always be less than that of any one component system. It is further proposed that the availability of end-item aircraft and of mission-essential systems varies continuously as a function of intrinsic and environmental factors. The resulting situation is that the more complex Army aviation systems, eg. the COBRA and Mohawk aircraft, are fully combat-ready for only a fraction of the time of reported end-item availability. It follows that on any one day, including the twentieth day of each month, Army aviation is only

partially ready to participate in a complete set of combat missions, and to support combined combat arms operations.

Combining the first and second components of the perceived situation, Army aviation units positioned in CONUS must completely "destroy" their OR, unit readiness, and force readiness, whatever their level of attainment, in order to transfer their assets OCONUS, and must subsequently "recreate" those combat capabilities under conditions of intensive warfare. Further, a substantial hiatus of time necessarily separates the existence of effective combat aviation in CONUS from its "rebirth" in Germany that span of time would see units currently deployed in Europe bearing the brunt of combat missions, and of combat losses in the event of a surprise engagement.

It is proposed then, that the overall problem is the probable impossibility of relocating the Army's CONUS-based aviation assets to anticipated combat locales at a rate commensurate with intensive warfare usage and attrition rates, and in a condition of mission readiness corresponding to the needs of engaged field commanders. There exists a consequent interest at the level of Department of the Army (DA) in the relocation and prepositioning of additional mission-ready aviation weapon systems in near proximity to potential battle areas. This project is intended to explore the various operational and cost aspects, and the technical feasibility of such a deployment.

b. Breakdown of the Problem:

(1) Prepositioning Requirement: The determination of the types and numbers of aircraft, operational personnel, and associated materiel required OCONUS to provide "balanced" Army aviation support to joint NATO combat arms units under realistic engagement conditions with Warsaw Pact Forces.

(2) Timing Requirement: The determination of the time frames needed to transfer mission-capable aviation units from CONUS to OCONUS combat areas

in sufficient quantity to match projected attrition rates of aviation systems now in-country when engaged in intensive warfare.

(3) Technical Feasibility: The value of relocating additional aviation weapon systems assets (as needed) to positions near potential FEBA's hinges upon the feasibility of maintaining those assets in a high state of mission readiness with an absolute minimum amount of operational usage and of incremental maintenance support. Further, the assets must be able to surge reliably to combat levels of operational usage upon introduction of flight, supply, and maintenance support personnel airlifted from CONUS.

(4) Forward Operations Control: The requirement for prepositioning a skelton staff of executive, flight, maintenance, and supply personnel who would safeguard, control, operate, maintain, and support the above assets in combat-ready condition OCONUS. The "tenant" staff must integrate their functioning with the operations of the "landlord" unit and/or with those of theater support organizations which might serve as hosts and/or as staging areas.

(5) Rear Operations Control: The feasibility of continuing effective training and integrated combat arms operations in CONUS aviation units whose assets are transferred OCONUS in substantial quantities for the purpose of prepositioning. Such units would also be required to furnish personnel needed to implement In-Country operations per (3) above.

(6) Transfer Operations Feasibility: The feasibility of effecting the transfer from CONUS, under crisis conditions, of all residual personnel and equipment items required to reconstitute front line functioning Army aviation support units. Transfer activities must be sequenced to generate immediate military usefulness of prepositioned ready assets, while assuring the rapid integration of assets flown from CONUS into each fighting unit's operations.

(7) Combat Readiness Measurement: The feasibility of using existing methodologies of systems readiness measurement for use by field commanders to match weapon systems and missions readily and continuously.

(8) System Security: Weapon systems and supplies deployed in potential battle areas must be effectively protected from hostile actions, as well as from misuse and cannibalization by friendly forces. The provision of hardened or camouflaged emplacements, of armed protection, and of mechanical and administrative safeguards against cannibalization and misappropriation of assets constitutes a complex problem area.

c. Statement of General and Particular Objectives:

The prepositioning technique which is the subject of this project entails the redeployment of aircraft from CONUS to operational aviation and/or to aviation support units currently located in the immediate vicinity of potential combat areas. These "augmented" units are not intended to acquire "ownership" of the aircraft or of ancillary equipments and supplies, but are charged with providing maintenance facilities, personnel, operational, and security support to the redeployed weapon systems. In the event of mounting international tension or of open conflict, CONUS operational "owner" personnel will be flown-in to join their mission-ready equipment, and the augmented units will return to their normal command configuration. Completion of this exercise will be marked by the reconstitution In-Country of each "depleted" CONUS tactical unit with its full complement of materiel and personnel. In view of the above scenario, the objectives of this study project are:

(1) To determine via coordination with TRADOC, FORSCOM, and USAREUR statements of need for AMCRIC prepositioning as a function of perceived

contingency requirements, of inadequacies in the current force deployed OCONUS (materiel, personnel, and facilities), of current mission-readiness capabilities in Germany, and of the time required to transfer dedicated aviation units located in CONUS to Europe.

(2) To determine via consultation with the other services (NAVMAT, AFSC, and AFLC) plans and lessons learned in their prepositioning concepts. These may prove useful in formulating, executing, and assessing Army pre-positioning activities.

(3) To determine the minimum amounts of flying, maintenance, and supply support (measured in hours and manhours, in stockage levels, in tools and equipment, and in dollars) required to assure the operational readiness of end-item aircraft, of communications devices, and of weapon systems;

(4) To determine the capability of augmented OCONUS units of various types to accept, protect, and support relocated aviation systems, personnel, and supplies so as to assure their readiness for surging into combat operations;

(5) To determine the ongoing operational, cost, and readiness conditions of "depleted" residual units located in CONUS;

(6) To determine the joint capability of the Armed Services to transfer residual personnel, weapon systems, and supplies into tension or combat areas, and the timing of activities needed to reconstitute fully active units In-Country;

(7) To determine optimal and cost-mandated "proportions" for the redistribution of Army aviation assets and personnel according to the AMCRIC concept;

(8) To adapt existing measures of operational and unit mission readiness for use in this study. Measures of readiness should be sufficiently detailed

to enable field commanders to assess at frequent intervals the availability status of all airframes, weapon systems, and personnel that are essential to the sustained performance of specific combat mission and of combinations of missions.

6.0 Approach and Methodology

a. General Statement of Approach:

The technical basis of this study project, subject to the establishment of "need" for AMCRIC, is a determination of the lowest level of flight operations sustainable without incurring significant degradation of essential systems and components,by means of field tests. These exercises will involve paired units. Some of the units will function in the "Augmented" configuration, and others will function in the "Depleted" configuration. A verifying exercise will conclude the program, with paired units operating in CONUS (Depleted) and in Germany and (Augmented), and will include a combat emergency drill involving personnel and equipment transfers and the reconstitution of (Depleted) CONUS units in Germany. The reconstructed units will participate in a major field maneuver of the "REFORGER" type, to demonstrate the effectiveness of the concept under near-realistic conditions.

b. Breakdown of Approach and Methodology:

(1) The first step of this study project is a determination of the "need" for prepositioning Army aviation assets OCONUS in accordance with the AMCRIC concept. The need must be a quantifiable justification for what is, in effect, a significant and politically sensitive decision to deploy additional war materiel to the European theater in a state of combat readiness. The "need", therefore, should be derived by TRADOC, FORSCOM, and USAREUR from an analysis of the current status of Army aviation in potential

engagement postions. Specifically, study participants must determine:

* The number and type of flight personnel "seats" required on each successive day of a full-scale engagement in order to execute the missions assigned to Army aviation.

* The number and type of aircraft and flight personnel available on each successive day, assuming attrition rates develop as predicted, and assuming that infusions of replacements and additions are successfully implemented from CONUS.

* The number and type of support and logistics personnel available on each successive day; and

* The type and quantities of mission-essential support materiel available in the combat theater on each successive day of conflict.

It is proposed that the above determinations yield the quantity of aircraft, supply support, and weapon systems, and the quantity and types of personnel needed for air transportation to prepositioning points and/or to staging areas. Each determination should be made over a period of not less than 10, and not more than 30 days from initiation of hostilities.

(2) The second step of this study is a system-by-system review of Army experience with curtailed flight hour programs to determine the maintenance, reliability, and maintainability, experiences associated with near "stand-down" operations. The purpose of this effort is to establish the conditions under which various types of prepositioned aircraft systems may be held ready

for "surge" to combat-level operations from an extremely low level of routine activity.

Those systems and subsystems which are found to be incompetent in this respect must be identified, and their requirements for inspection, operation, maintenance, and supply support must be defined. Based upon these determinations, one or two aircraft types will be selected for the experimental portions of this study, and lists and schedules for their minimum operation and inspection will be drawn up to assure high levels of reliable readiness for combat duty.

(3) One or more pairs of CONUS Army aviation units comprising diverse types of aircraft systems will be selected for drill. Each pair of units will be comprised of a Depleted Unit (DU) and an Augmented Unit (AU). Selected personnel, equipment, stores, and aircraft will be redeployed from the DU to the AU in increments, the size of each increment (save the first) to be determined through the initial experience. Flying hour programs assigned to each pair of units will be assigned to DU's and AU's according to their altered complement of aircraft and personnel, and according to their matrix of missions. Redeployed aircraft will rely primarily upon runups for the "exercising" of their critical systems, but will also participate in AU flying hour programs for the purpose of verifying mission readiness and mission performance capabilities.

Dedicated personnel will be required to measure the operational and cost parameters of the drill in all units involved. Since maximum combat readiness is the objective for AU's, DU's, and for the prepositioned systems, all data collection will be oriented to the frequent tracking of mission

readiness and will be analyzed accordingly, e.g., costs will be related to the number of on-time mission starts and completions.

(4) During the course of the above drill, the DU's will simulate a war alert in which a preselected contingent of their personnel will be flown for a number of hours (corresponding to a CONUS-Germany transit) prior to being transported to the staging site of the AU. Upon arrival, these "First-wave", personnel will be integrated with the "In-Country" cadre and will proceed to fly a realistic set of (simulated) combat missions. At the same time, the residual personnel of selected DU's will prepare their aircraft for shipment "OCONUS" and will relocate and reorganize their units at the staging site of each AU through the absorption of their forward element. During the period intervening between the delivery of First-wave DU personnel and the completion of the residual DU's move of men and materiel, prepositioned aircraft will be flown under the command structure of the AU's.

(5) Assuming that the preceding exercise proves effective (i.e., that the mission readiness and mission performance of AU's is measurably enhanced, and that the DU's are capable of deploying into combat more rapidly than otherwise possible), a similar drill will be implemented by pairing of CONUS-located DU's with AU's located in Germany.

This exercise, however, will be shortened via the application of "lessons learned". The number of aircraft and personnel assets deployed to Europe will represent an optimized fraction of CONUS DU's. The OCONUS AU's will be advised by representatives of AU's that have participated in the CONUS drill. The two-step transfer of CONUS DU's into the European theater will be made fully realistic, including "jet lag" experience and interim functioning within the command structure of unfamiliar organizations. Finally, the reorganized

DU's and host AU's will participate jointly in REFORGER-type exercises, subject to Army rules of engagement and performance ratings.

(6) In the test drills of (4) and (5) above, a determination will be made of the best locations for the emplacement of prepositioned aircraft relative to host units. Locations may include:

* POMCUS storage, maintenance, and staging areas, with Army aircraft housed in hanger-type warehouses or parked on terrain suitable for flight operations;
* Prepositioning with U. S. Army National Guard AVCRADS (forward depot-level diagnostic and maintenance/rebuild facilities) deployed per the determinations of the "Depot Roundout for Aviation" project;
* Prepositioning with U. S. Army second echelon support organizations, sharing their inferior and open-air housing and operating areas.
* Prepositioning with U. S. Army line units, fully sharing their enclosed and open-air facilities.
* Any of the above locations, with the prepositioned assets individually enclosed in tailored "redi-covers" and camouflaged with LWCSS modular assemblies. This prepositioning mode lends itself to both concentration or dispersal of aircraft, to the use of inexpensive "dummy" aircraft to confuse enemy observers, and to helilift-relocations of enclosed aircraft to staging areas. Relatively simple locking devices may be employed with redi-covered aircraft

to assure security from cannibalization attempts, and

the aircraft may be stored in fully-fueled and armed

condition if appropriate security is provided.

It is proposed that both the CONUS-CONUS and CONUS-USAREUR drills should include the testing (as feasible) of each of the above locations and storage modes, to determine "optimum" single or combined solutions. The issues for selection of such solutions include the operability of the aircraft, flight safety, assets security, vulnerability to detection and to destruction by hostiles, ease of staging for the reassembly of CONUS-bases units, and the relative costs of housing, maintenance, and supply support. Cost-effectiveness analyses of each prepositioning configuration will be required.

c. Data Acquisition Requirements:

Data requirements for this study described in the preceding sections of this Draft Plan of Action. In general terms, all data collection will be designed to measure the availability of end-item aircraft, of weapon systems, of communications gear, of personnel, and of supplies required to support combat missions. Data collection will also be designed to record the costs associated with the one-time elements of each activity and with those elements which would recur cyclically or on an ongoing basis. Finally, data collection will be designed to acquire operational times for all activities specifically related to implementation of the AMCRIC concept, with a view toward computer wargaming of such deployments.

It is intended that dedicated data collection will be supplemental to, and not substituted for, the collection of data currently mandated for aviation assets.

d. Model Construction Requirements:

An AMCRIC model is envisioned that will simulate the operating times and the costs of various two-step deployments to OCONUS locations. Model inputs will include CONUS and OCONUS units locations, aircraft types, numbers of aircraft on hand, and personnel parameters in each unit. Model outputs will include optimal units pairings, optimal AMCRIC assets fractions under time and cost constraints, times required to deploy AMCRIC and residual assets, multi-mode transportation needs, costs associated with implementation, and a tabulation of combat missions feasible In-Country at discrete intervals as AMCRIC and residual assets are deployed. It is expected that such a model will be of use in wargaming Army aviation deployments to potential combat theaters, and that it will be adaptable to the wargaming of CRIC deployments of other types of materiel and vehicles, e.g., armor, mobile artillery, etc. (ARMCRIC, MACRIC, etc.). A model that will integrate all such two-step deployments of war materiel (WARMCRIC) to yield operational and cost parameters, may be conceived in the distant future.

e. Presentations and Reports:

AMCRIC concept presentations will be made to DARCOM at the beginning of this study project, to obtain critiques and guidance, and to help define each phase of the effort. Further presentations will be required at IPR's and SAG meetings, and Technical Reports will be prepared following completion of each of the test drills.

7.0 Schedule (Project Definition):

a. Project initiated 17 April 1978 (TSARCOM Commander's guidance).

b. Initial Draft Plan of Action completed: 10 May 1978.

c. DARCOM/AMSAA review of project: 25 May 1978.

d. Revised Draft Plan of Action completed: 6 October 1978.

e. TSARCOM/AMSAA review of project: 27 October 1978

f. Revised Draft Plan of Action to DARCOM for staffing and approval: 1 November 1978.

8.0 Project Risks:

a. Technical Risks:

Implementation of this study does not involve the use of novel techniques in any of the analyses, field drills, exercises, or modeling efforts which are described above. Technical Risks are, therefore, estimated to be LOW.

b. Schedule Risks:

The schedule shown at 7.0 is based upon an initial estimate of 31 December 1979 as an end date for project activities. That estimate is based upon initiation of the project during the first quarter of FY 1979. It is also evident from section 5.0 that project activities will require the coordinated efforts of DA/DCSLOG, DA/DCSOP, DA/DCSPER, FORSCOM (including field elements), TRADOC, USAREUR and 7th ARMY, TECOM, DARCOM and TSARCOM. In view of the number of participants, Schedule Risks are estimated to be MODERATE for project initiation activities, and HIGH for all subsequent work.

9.0 Resources Required:

a. Team Structure:

Due to the involvement of various elements of DA, and of several MACOMS and MASCOMS, this project requires the formation of a Study Advisory Group (SAG) to act as a Steering Committee, and of a Study Execution Team of time-variable composition, charged with the implementation of required analytical and experimental/operational efforts. It is proposed that the SAG include

all of the members of the Depot Roundout SAG.

b. Computer/Programmer Support:

Computer and programmer support will be required in TSARCOM and in AMSAA for the purpose of creating the AMCRIC and similar models based upon data collected during Phases 3 thru 5 of this project.

c. TDY, Funding, Floor Space:

It is expected that a minimum of 12 TDY excursions will be required of TSARCOM personnel, each involving two persons for an average of three days. Funding for these excursions, and for the execution of the study project, is a key agenda item during Project Initiation efforts. It is not expected that dedicated floor space or furniture will be needed for this project.

VALENTIN C. BERGER
Operations Research Analyst

APPENDIX B

DEPARTMENT OF THE ARMY
HEADQUARTERS US ARMY MATERIEL DEVELOPMENT AND READINESS COMMAND
5001 EISENHOWER AVE., ALEXANDRIA, VA. 22333

DRCPS-P

21 February 1979

DRSA - Lets Pl
M
26 Feb 79

Major General J. C. Faith
Director, Operations and Readiness Directorate
Office of Deputy Chief of Staff
for Operations and Plans
Department of the Army
Washington, D.C. 20310

Dear General Faith:

I am inclosing a copy of a draft plan of action for a proposed study, titled: Aviation Materiel Combat Ready In-Country (AMCRIC), in which you may have an interest in your capacity as Chairman of the General Officer Steering Committee for Rapid Reinforcement of NATO. The proposed study was submitted for my review by the Commander of the US Army Troop Support and Aviation Materiel Readiness Command (TSARCOM).

The study is intended to examine the principal issues of relocating and prepositioning aircraft systems and complementary materiel OCONUS in near proximity to potential battle areas and to examine the cost effectiveness of such deployments.

The concept of prepositioning early deployable aircraft may have merit from a readiness standpoint. However, the scope of the study would exceed the authority and mission responsibilities of this Command as they relate to several key taskings required to be directed by the proponent for a study of this nature. Since the study objectives and the attendant issues parallel those being considered by your Committee, you may wish to review the plan as a means to improve the Army's ability to reinforce NATO.

If you believe the proposed study is worthy of further effort you may wish to assign this project to the DA staff element having responsibility for aircraft systems for proponency, assignment of study

DRCPS-P
Major General J. C. Faith

tasks to appropriate commands or staff elements and establishment of a study advisory group.

Sincerely,

EUGENE J. D'AMBROSIO
Lieutenant General, USA
Deputy Commanding General
for Materiel Readiness

1 Incl
as

CF:
LTG Eivind H. Johansen, Deputy Chief of Staff for Logistics, Department of the Army, Washington, DC 20310
Major General Richard D. Thompson, Commander, United States Army Troop Support and Aviation Materiel Readiness Command, 4300 Goodfellow Boulevard, St. Louis, MO 63120
Mr. Joseph P. Cribbins, Special Assistant to the Deputy Chief of Staff for Logistics, Department of the Army, Washington, DC 20310

DEPARTMENT OF THE ARMY
HEADQUARTERS US ARMY MATERIEL DEVELOPMENT AND READINESS COMMAND
5001 EISENHOWER AVE., ALEXANDRIA, VA. 22333

DRCPS-P

21 February 1979

Major General Richard B. Thompson
Commander, United States Army Troop Support and
Aviation Materiel Readiness Command
4300 Goodfellow Boulevard
St. Louis, MO 63120

Dear General Thompson:

Thank you for your letter of 3 January 1979 in which you furnished your plan of action for the Aviation Materiel Combat Ready In-Country (AMCRIC) study.

I appreciate your ideas on this vitally important subject. The study proposal appears to be comprehensive and in sufficient detail to adequately evaluate the various aspects of prepositioning aircraft systems near the potential battle areas. I do, however, have some concerns on this subject. First, in analyzing your proposal, it is clear that the DA Staff and the other major commands would have key responsibilities for most of the issues involved in the study. Many of these actions would transcend the authority and mission responsibilities of this Command. Another factor impacting your proposal is the current DA policy whereby aircraft are normally excluded from prepositioning of materiel configured to unit sets (POMCUS) and are specifically excluded from being prepositioned in Operational Projects. Finally, many of the tasks are similar or parallel to those currently being debated by the DA General Officer Steering Committee for Rapid Reinforcement of NATO.

In view of the above, I am forwarding your proposal to the Department of the Army Staff with a recommendation that it evaluate the need for such a study, and if so, that DA assume proponency, to include tasking of appropriate commands or staff elements and establishment of a study advisory group.

Sincerely,

EUGENE J. D'AMBROSIO
Lieutenant General, USA
Deputy Commanding General
for Materiel Readiness

APPENDIX C

For use of this form, see AR 340-15, the proponent agency is TAGCEN. ZGWOOY

DALO-AV	SUBJECT: Study Proposal: Aviation Materiel Combat Ready In-Country (AMCRIC) Study

XO THRU ~~DALO-HQ~~ Capt L. Harris/ADCS206 FROM DALO-AV DATE 1 Apr 80 CMT 1
TO CDR, USALEA LTC Dick Thompson/70487

1. Request you take action to complete the study described below.

2. Title: Aviation Materiel Combat Ready In-Country (AMCRIC).

3. Proposed priority A1.

4. Purpose: Determine the best method to forward deploy, maintain and have ready for use aviation assets belonging to CONUS early reinforcing forces.

5. Background/Discussion:

a. References:

(1) AMCRIC study plan of action, 14 August 1979, previously furnished.

(2) MFR, HQ DARCOM, 6 June 1978, subject: TSARCOM Proposed Study, Aviation Materiel Combat Ready In-Country (AMCRIC) (Inclosure 1).

(3) Department of Defense Consolidated Guidance Draft FY 1982-1986, 8 February 1980 (Inclosure 2).

(4) AR 5-5, The Army Study System.

b. Discussion:

(1) Reference 5a(1), describes a concept to preposition aviation assets prior to mobilization in a manner that will make them immediately available for CONUS deploying forces. Problems associated with the concept are briefly addressed, and methods suggested to implement the concept are included.

(2) Reference 5a(2) provides the results of the first ad hoc meeting at DARCOM with specific recommendations made to be included in the study.

(3) Reference 5a(3) provides the latest guidance from DOD on the requirement for early availability of Army aviation assets in a NATO reinforcement action.

(4) Reference 5a(4) provides direction for initiation of Army studies.

(5) No formal approval of the concept addressed above has been received. Informal coordination with MACOMs reflects a general acceptance of the concept, with only official comments being received from CINCUSAREUR (Inclosure 3).

DA FORM 2-65 REPLACES DD FORM 96, WHICH IS OBSOLETE. USCPO

(6) TSARCOM and AVRADCOM have some pertinent data on a similar type deployment that occurred during the conflict in RVN. Use of this data should reduce the scope of the evaluation and preclude extensive study.

6. Benefits: The study will solve the problem of rapidly deploying reinforcing aviation units to USAREUR without requiring extensive sea or airlift at the outset of mobilization.

7. Courses of action/technical approach: As a minimum the following elements will be considered:

a. Determine best concept for locating prepositioned aircraft.

(1) Preposition with present POMCUS.

(2) Preposition in similar OCONUS aviation units.

(3) Preposition at sea on barges or ships.

b. Consider available sea and airlift that may be available for shipment of airframes.

c. Examine types of protection that can be used to store aircraft; i.e., DRICLAD, flexible barriers, humidity controlled warehouses, etc..

d. Use of self-deployment capability.

e. Should aircraft be operated on a limited basis or semipermanently stored.

f. Best location for operations and maintenance of aircraft and responsibility for both functions if aircraft are not stored.

g. Determine types and number of aircraft to be prepositioned.

h. Determine if AVCRAD unit can support the prepositioning concept.

8. Responsibilities:

a. A Study Advisory Group (SAG) will be established under the chairmanship of the Special Assistant to the DCSLOG/Chief, Aviation Logistics Office.

b. The USALEA POC will provide overall monitorship of the study, determine techniques to be employed to accomplish the study and act as deputy to the chairman of the SAG.

DALO-AV
SUBJECT: Study Proposal: Aviation Materiel Combat Ready In-Country (AMCRIC) Study

9. Administrative details:

a. An ad hoc work group meeting will be scheduled prior to 18 April 1980 (place to be determined by coordination between this office and USALEA point of contact). Purpose of this meeting is to determine tasks to be performed, prepare tasking documents, establish a plan and study directive to accomplish the study, and determine membership of the SAG.

b. A USALEA plan of action to accomplish the study should be submitted within 15 work days following the meeting in paragraph 9a above. Completion date of the study will be included in the USALEA plan.

c. DALO-AV POC is LTC Dick Thompson (alternate - Mrs. Carolyn Chapman).

JOSEPH P. CRIBBINS
Special Assistant to the Deputy
Chief of Staff for Logistics

21 May 1980

USALEA PROJECT PLAN

1. TITLE: Aviation Materiel Combat Ready in Country (AMCRIC).

2. PROJECT IDENTIFICATION NUMBER: Z60009

3. PURPOSE: Determine the best method to forward deploy, maintain, and have ready for use aviation assets belonging to CONUS early reinforcing forces.

4. REFERENCES:

a. Tasker titled Study Proposal Aviation Materiel Combat Ready in Country (AMCRIC) Study, DA DCSLOG, 1 April 1980.

b. TSARCOM AMCRIC study plan of action, 14 August 1979.

c. MFR, DARCOM, 6 June 1978, subject: TSARCOM Proposed Study, Aviation Materiel Combat Ready in Country (AMCRIC).

d. DOD Consolidated Guidance, Draft FY 1982-1986, 8 February 1980.

e. MFR, USALEA, 1 May 1980, subject: Aviation Materiel Combat Ready in Country (AMCRIC) Ad Hoc Work Group (AHWG) Meeting.

5. TERMS OF REFERENCE:

a. Problem: Army units scheduled to reinforce USAREUR have a significant amount of prepositioned materiel in Europe; however, no aviation materiel has been included in previous prepositioning nor planned for.

b. Impact of problem: All aviation materiel now has to be lifted to be available to round out the units capability to function as a combined arms team. Criticality of airlift during initial reinforcing actions may delay movement of aircraft because the low density loads that exist with aircraft would not allow sufficient other high priority materiel to be moved. Use of sealift will not allow aircraft to reach USAREUR in time to meet the forecast requirement. Use of the self-deployment capability of the CH-47 and UH-60A is an option; however, another study group is evaluating this option.

c. Objective: Preposition aviation materiel in needed types and quantities to support scheduled reinforcing units' aviation requirements.

d. Scope: Effort will include studying Army units planned for deployment; determining prepositioning locations and other resource requirements in CONUS; estimating additional training that may be required by a reduction of aviation resources in CONUS; evaluating use of Aviation Classification Repair Activity Depots (AVCRADs); evaluating the wholesale logistics required; and evaluating other US Armed Services' prepositioning concepts. Testing suggested in basic AMCRIC study has been determined to be unnecessary and will not be done.

e. Limits: Effort is limited to determining the most feasible prepositioning concept using current state-of-the-art and materiels available now in US Army resources. Implementation and associated actions such as budgeting for resources to accommodate prepositioning are outside confines of intended effort. Gross cost estimates associated with the prepositioning concept recommended will be provided.

f. Assumptions:

(1) Effort is focused on CONUS units which have materiel in POMCUS in USAREUR.

(2) Self-deployment capability built into current Army aircraft will be considered a viable prepositioning method.

(3) Current storage procedures are technically capable of supporting aircraft in storage for up to 6 months without significant deterioration.

(4) Airlift and sealift will not satisfy reinforcing requirement for aviation materiel creating the need for prepositioning.

g. Essential elements of analysis:

	PARTICIPANTS*
(1) Identify all possible means of prepositioning, including use in service in USAREUR, and recommend one method that satisfies the requirement.	FORSCOM, USAREUR, TSARCOM
(2) Identify locations in USAREUR that can accept prepositioned aircraft.	USAREUR
(3) Identify current methods used to store aircraft and determine effectivity in support of prepositioning.	TSARCOM
(4) Identify aircraft that may be considered for self-deployment to USAREUR and evaluate current planning to execute self-deployment.	FORSCOM, TRADOC, TSARCOM
(5) Identify the number and type of aircraft that may be prepositioned.	FORSCOM, USAREUR
(6) Identify CONUS combined arms training needs that prepositioning of aircraft may cause.	FORSCOM, TRADOC
(7) Evaluate use of AVCRAD to support prepositioning.	USAREUR, DARCOM, TSARCOM
(8) Identify material support that must accompany the prepositioning concept.	TSARCOM, USAREUR, FORSCOM
(9) Identify alternate methods of accountability and readiness reporting for prepositioned aircraft and the methods for transfer when prepositioning occurs and when CONUS unit overseas arrival occurs.	FORSCOM, USAREUR
(10) Identify interrelationships between FORSCOM and USAREUR that will assure adequate readiness reporting and funding.	FORSCOM, USAREUR

*Additionally, USALEA performs role of analyst, evaluator, and project leader.

6. TECHNICAL APPROACH:

a. Review and evaluate TSARCOM AMCRIC study and supporting documents for purpose of determining methodology to be incorporated in a USALEA tasker from ODCSLOG (DALO-AV).

b. Conduct an ad hoc work group (AHWG) meeting for purpose of briefing intended participants on AMCRIC and determine scope of study.

c. Obtain technical data from TSARCOM that was used to complete AMCRIC study.

d. Evaluate TSARCOM AMCRIC technical data and information obtained from AHWG participants and develop a project plan to be used as a program to complete the study.

e. Determine current technology used to store aircraft and helicopters.

f. Review aircraft prepositioning concepts used by US Navy for helicopters.

g. Conduct direct coordination with MACOMs to confirm need, review requirements, and obtain data.

h. Accumulate experience by industry with use of environmental protective devices used on aircraft and components.

i. Determine status of planning now being accomplished by ARNG/DARCOM to establish AVCRADs.

j. Accumulate data on current capabilities on Army aircraft that are being considered candidates for self-deployment.

k. Document results of 22 April 1980 ad hoc work group meeting including decision and related rationale which eliminated areas to be examined and/or reduced scope of the study. Include in study report.

l. Conduct IPR, finalize recommendations, and publish final report.

7. SUPPORT AND RESOURCE REQUIREMENTS: See Inclosure 3.

8. ADMINISTRATION:

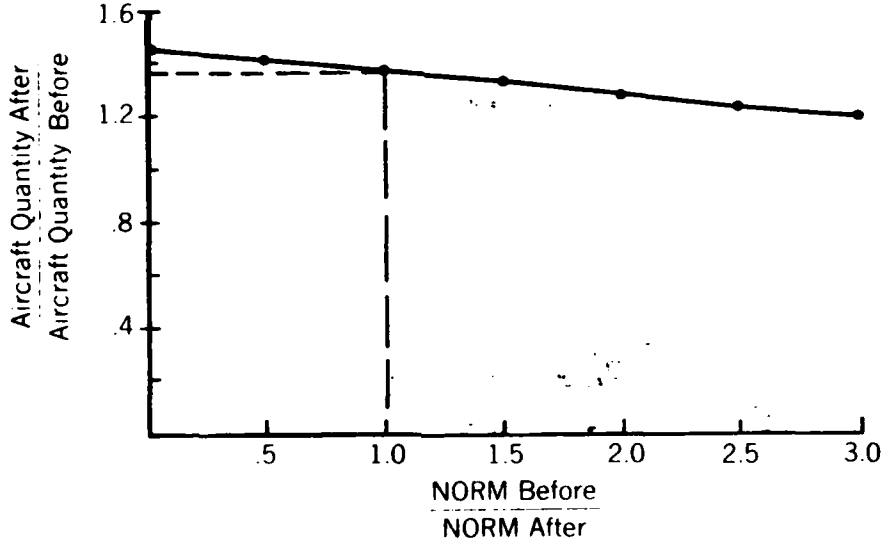
a. USALEA action officer will conduct study with assistance of TSARCOM member.

b. Ad hoc work group meeting: Established for purpose of coordination with major participants of study effort.

c. Control procedures: USALEA Review and Analysis will chart progress. One IPR will be scheduled prior to making any detailed recommendations.

d. Reports: Final report to be rendered at completion of analysis.

NORM STUDY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GLOBAL CHEMICAL SYSTEMS, INC.
2940 W. 139th St., Gardena, Calif. 90249 (213) 538-2920

THE COMPANY...

Originally incorporated as "Global Coatings Corporation" in 1965, this company has been devoted to developing optimum-efficiency preservation systems for high-value equipment. The success of the company in this purpose can be seen in four of its major products.

The initial product was a single coat chemical system for the cocooning of such end products as helicopters. Under contract to both the U.S. Army and Navy, this system was perfected and is described in MIL-C-6977C. The company provided extensive field support in the utilization of this system through teams in the U.S. as well as foreign nations.

In 1967, the company developed and produced a system trademarked "Clear Tite Packaging System." the heart of this system is automated equipment, and, under contract with the U.S. Army, training and support of systems usage took place in the United States, Vietnam, and Okinawa. This product was followed in 1968-69 by an acrylic coating system that was easily removable by application of an alkali solution.

The company became "Global Chemical Systems, Inc." in 1973, and was approached by the U.S. Army with the idea of developing the most sophisticated storage system yet. This success in serving the military has confirmed the company's philosophy... that the success or failure of a company rests almost entirely with the skill and dedication of its people and their ability to recognize a customer's need and satisfy that need in an exemplary manner. Global Chemical Systems believes that customer satisfaction must be earned - then earned again - with the best possible service to the customer and the dedication of the company to do its job well.

THE PRODUCT...

Global Chemical Systems is now the producer of the sophisticated "Redi-Cover" storage system. Developed under a series of U.S. military Research and Development contracts, this system is:

easy to install and remove

field repairable

air tight

tailored to form fit

environmentally versatile

COST EFFECTIVE.

The basis of this cover system is a proprietary plastic compound possessing exceptional characteristics. To date, four basic materials have been developed using this compound - 4050, 4051A, 4062, and 4070. Each possesses unique properties and applications. All Global materials show remarkable chemical resistance, flexibilty at temperature extremes, abrasion resistance, and excellent field life. Coupled with the patented "Maxi-Grip" air-tight closure/zipper system, Global Redi Covers provide the best protection for high-value equipment at the lowest cost.

In application, the system is "one-piece" and can be easily installed and removed repetitively by unskilled personnel. Global's current patterns include designs for both "flyable" configuration aircraft as well as semi-disassembled transport and/or long-term storage craft, in addition to cover systems for component parts. Provisions can be included in covers for visual inspection ports for the regular observation of equipment condition and, where applicable, the inclusion of dynamic dehumidifying systems.

In short, Global Chemical Systems and its Redi Cover are the picture of versatility. Cover systems have been developed for fixed and rotary-wing aircraft, engines, parts, and even locomotives. Recently the company was chosen to design and produce cover systems for atomic reactor components - Global Chemical Systems can design a program for your needs, too.

GLOBAL CHEMICAL SYSTEMS, INC.
2010 W 130th St, Gardena, Calif 90249 (213) 538-2020

06 December 1976

TECHNICAL BULLETIN — Global 4060 casted film used in the fabrication of Global "Redi-Covers".

Product	**Polyurethane Elastomer (Ether Base)**
Form	**Continuous film, 54" in width.**
Mil Thickness	**Available from 4 to 30 mils.**
Weight	**15 mils - one pound per square yard.**
Color	**Clear or colored to the demand within limits of the formulation.**
Appearance	**Finish may be either matte or smooth.**
Odor	**Film has no odor or plasticizers present to effect attack substrate surfaces.**
Physical Properties	
Waterproofness Test Method 3017 Procedure B or C Fed Std 101	**Material resists the penetration of water for a minimum of seventy two (72) hours.**
Greaseproofness Test Method 3015 Procedure B or C Fed Std 101	**Film resists penetration of grease.**
Oil Resistance Test Method 3015 Fed Std 101	**The material subjected to oil as specified shows no leakage, swelling, shrinkage or other degradation.**
Temperature Resistance Test method 3008 Procedure D Fed Std 101	**Global 4060 resists blocking. Film is easily flexed at temperatures -40°F with no signs of cracking.**
Tensile Strength Test Method ASTM-D412	**Longitudinal - 7500 (psi)** **Transverse - 7500 (psi)**
Tensile Strength after Hydrolitic Test Method ASTM-D412	**Longitudinal - loss of under 35%** **Transverse - loss of under 35%**
Tensile Strength after Air Oven Test Method ASTM-D412	**Longitudinal - loss of 35%** **Transverse - loss of 20%**
Elongation Test Method ASTM-D412	**Longitudinal - 750 %** **Transverse - 820%**
Puncture Resistance Test Method 2025 Procedure A Fed Std 101	**No puncture**
Tear Resistance Test Method ASTM-D1004	**Longitudinal - 7.5 Max load (lbs)** **Transverse - 7.5 Max load (lbs)**
Volatility Test Method ASTM-D1203 Method A	**Weight loss 0.36**
Resistance to Light Test Method 505 Procedure I Mil Std 810	**No embrittlement, cracking, or delamination**
Resistance to Abrasion Test Method 1091 Fed Std 406	**Wheel load at 500 grams with 2,000 revolutions. Result -.02 loss in grams.**
Water-Vapor Transmission Rate Test Method 3030 Procedure A Fed Std 101	**2.5 grams in 24 hours**
Resistance to Flame Test Method 2022 Fed Std 406	**Time to extinction - 10 seconds**

Special note: All materials tested were 20 mils thick.

APPENDIX F

LOGISTIC ASSISTANCE SPECIAL REPORT
(FSA (TSARCOM) Memo 335-1)

1. TO: STSFS-EE	2. FROM: Bill Daywood Duty Phone 2724-6298	3. System/Equipment/End Item UH-1H 4. Employee ID Code 0224-145-010
5. Action Required (X) Information ( ) Action	6. NSN 7. Serial No.	8. Part Component/Noun 9. Time/Hours (TSN/TSO)
10. EIR Control No./Date	11. Reference (TM, TB, MWO, etc.) Arrival of 23 UH-1H Helicopters of E Co, 501st ABC at Bremerhaven	

12. Discrepancy

The helicopters were unloaded on 25-26 July 1980. Each helicopter was covered with a yellow heavy vinyl type bag. The bag was shaped in the form of the helicopter with a zip lock type closure running the full length of the bottom section. The bottom of the bag was formed to fit around the cross tubes leaving the tubes and skids exposed. There was a tubular opening for the mast assembly. Each bag was powdered (similar to talcum). When the bags were removed the helicopters were clean and had been well protected from dust and any cargo contaminant that was stored near them. The bags did not scratch or damage the helicopter finish. There was no evidence of salt water or salt air corrosion at this time. Each bag had its own storage bag (carrier) with a repair kit and a closure tool.

All helicopters had the following removed and boxed separately:

1. Main Rotor Blade Set
2. Main Rotor Hub Assembly
3. Mast and Swash Plate and Collective Sleeve Assembly
4. Stabilizer Bar and Control Tube Assembly
5. Tail Rotor Blades and Hub Assembly
6. All External Antennas

All boxes were of wood and well made, each box had the S/N and assembly stenciled on each end. Every helicopter had all of its components, with the exception of the M/R blades, inside the cabin area (see photo).

The helicopters arrived at the assembly point in excellent condition. The only real noticeable damages were:

1. A R/H chin bubble was cracked (Temp repair, laced and taped for flight home station).

13. Corrective Action Taken and/or Recommendations:

— 45 days in bag (25 at sea)

— No O-H units

rec HAM 15 Sep 80

STSFS Form 518, 1 Oct 77 — Replaces DRSAV-F Form 518, 1 Mar 76, which is obsolete.

LOGISTIC ASSISTANCE SPECIAL REPORT (Continuation/Answer) (FSA (TSARCOM) Memo 335-1)

1. DATE	2. ID CODE
0224	0224-145-010

Block 12 Cont'd

2. Two had a navigation light assembly mashed. (Repairs will be accomplished at home station).

3. Two had cowling that were slightly dented and cracked. (Temp repair, stop drilled).

A problem area was ground handling wheels. The aircraft were towed from the docks to the assembly area (approx. 2 miles) and later to the run up area (rough grass terrain). Ground handling wheels have always been a problem.

The maintenance personnel were broken down into teams and were motivated by excellent team leadership. They worked 10-12 hour days and were in excellent spirits.
All aircraft were moved from the docks to the assembly point on 25-26 July 1980.
All were assembled and test flight completed by 1 Aug.
All with the exception of one had departed for home station by 2 Aug.
The one was stand by to carry maintenance personnel to home station.

This was an excellent unit movement and E Co 501st personnel should be commended for their preparation. The 394th Trans Bn and D Co 501st ABC personnel should also be commended for their skill in assembling and flight preparations.

Key personnel were:

MAJ Lame, CO D Co, 501st ABC = [illegible] TRIVET 2673-436/7159
CW2 Cass, E Co, 501st ABC
CW2 Garringer, 394th Trans Bn (AVIM)

The following maintenance personnel are POC for additional information:

SSGT Gurganious, 394th NCOIC at Bremerhaven, 2724-6241
SGT Pudil, 394th Team Leader (Can answer questions on shipping bags)
SGT Leonard, E Co 501st, (Helped devise internal loading of components in helicopters), 2673-836

[illegible] in bags (2[illegible])
[illegible] units

DRSTS Form 518a — Replaces DRSAV-F Form 518a, 1 Sep 76, which may be used.

APPENDIX G

COPY

6062

9798
30 Dec 1980

From: Commander, Naval Air Development Center
To: Commander, Naval Air Systems Command (AIR-4114C)

Subj: Laboratory Evaluation of Global File Number 8220

Ref: (a) Work Unit GA 801 (Maintenance Technology Program) of 1 Oct 80

Encl: (1) Evaluation of Global File Number 8220 of 18 Dec 80

1. Under reference (a), a series of laboratory tests were performed on samples of subject film, manufactured by Global Chemical Systems, Incorporated of Huntsville, Alabama, in order to help determine their suitability as material for use in storage bags for military aircraft. Tests were conducted to determine (a) the compatibility of the film with various operational fluids, (b) its flammability, (c) water vapor transmission rate, and, (d) tensile and elongation, both initially and after accelerated weathering.

2. The test procedures, results, conclusions and recommendations are reported in enclosure (1).

J. J. DE LUCCIA
By direction

Copy to:
COMDF
GENF
60DF (2)
606DF
6062DF
60622
60622:W.Knight;mw;12/19/80;2827

COPY

Naval Air Development Center
Aircraft and Crew Systems Technology Directorate
Warminster, Pennsylvania 18974

6062
18 Dec 80

EVALUATION OF GLOBAL FILM NUMBER 8220

A. Object

Samples of Global Film number 8220, manufactured by Global Chemical Systems Incorporated were evaluated to determine their suitability as material for use in storage bags for military aircraft.

B. Test Procedures

The following procedures were used:

1. Fluids Compatibility - Two sets of approximately one square inch test specimens were submerged into the following fluids:

   (a) MIL-L-23699 Lubricating oil

   (b) MIL-H-5606 Hydraulic fluid

   (c) MIL-H-83282 Hydraulic fluid

One set was exposed at room temperature (approximately 70°F) for two weeks, and the second set exposed at 150°F for two weeks. The specimens were weighed before and after exposure.

2. Flammability - Specimens were exposed to an open flame for several seconds and then the flame was removed and it was noted whether they continued to burn or not.

3. Water Vapor Transmission Rate - Method 3030 of Federal Test Standard 101 was used. The conditions utilized were 100°F and 90-95% R.H.

4. Tensile and Elongation - Tensile and elongation values were obtained on specimens as received and after 500 hours and 900 hours weatherometer exposure. The exposure was in accordance with method 5102 of Federal Test Standard 101.

C. Test Results

The numerical test results are found in Table 1. In the flammability test it was noted that the specimens stopped burning as soon as the flame was removed. Also it appeared that while in direct contact with the flame the specimens were melting rather than burning. The specimens exposed to the two hydraulic fluids in the fluid compatibility test became noticeably less flexible; i.e., more rigid.

Enclosure (1)

The results reported in Table 1 show that:

1. All three fluids tested had an adverse effect on the film. MIL-H-5606 and MIL-H-83282 fluids caused a significant weight loss whereas the MIL-L-23699 fluid caused an increase in weight.

2. The water vapor transmission rate was found to be slightly less than three grams per 100 square inches per 24 hours.

3. The tensile strength as received was over 5000 psi and increased to over 7000 psi after accelerated weathering. The elongation as received was approximately 25% and decreased slightly after accelerated weathering to 20.6%.

D. Conclusions

From these laboratory test results it was concluded that:

1. The hydraulic and lubricating fluids have an adverse effect on the Global 8220 material.

2. The Global 8220 material will provide short term protection when used as a bag for dehumidified aircraft.

3. Re-use of bags made of Global 8220 material will probably be minimal due to the adverse effect of the hydraulic and lubricating fluids.

E. Recommendations

It is recommended that:

1. The dehumidified storage of aircraft using this material as an enclosure be limited to a maximum of one year, unless or until actual usage indicates a longer or shorter period.

2. That funds be provided to test other barrier materials for this purpose which may have improved properties. A material consisting of 5-7 mils polyurethane as an internal ply and 8 to 10 mils of white vinyl as an external ply should be considered.

TABLE 1. TEST RESULTS FOR GLOBAL FILM NUMBER 8220

Exposure to:		
MIL-H-5606 at room temperature	% change in weight	-9.51
MIL-H-83282 at room temperature	% change in weight	-9.10
MIL-L-23699 at room temperature	% change in weight	+2.93
MIL-H-5606 at 150°F	% change in weight	-17.92
MIL-H-83282 at 150°F	% change in weight	-18.65
MIL-L-23699 at 150°F	% change in weight	+11.32
WVTR	grams/100 square inches/24 hours	2.93
Tensile - as received	psi	5148
Elongation - as received	%	25.3
Tensile after 500 hours weatherometer	psi	7642
Elongation after 500 hours weatherometer	%	21.5
Tensile after 900 hours weatherometer	psi	7696
Elongation after 900 hours weatherometer	%	20.6

APPENDIX H

OFFICE OF THE DEPUTY CHIEF OF STAFF FOR LOGISTICS
WASHINGTON, D.C. 20310

DALO-AV 0110521   28 NOV 1980

MG THOMPSON/ADC/DG/75301

MEMORANDUM THRU DEPUTY CHIEF OF STAFF FOR LOGISTICS

FOR VICE CHIEF OF STAFF, US ARMY

SUBJECT: Aviation Materiel Combat Ready In-Country (AMCRIC) Study -- DECISION MEMORANDUM

Approve concept planning and test bed, but do not execute until we get a little better feel for how it will work. Good work!

1. Purpose: To obtain concept approval to proceed with prepositioning selected, full mission capable aircraft in a POMCUS type storage in USAREUR.

2. Discussion:

a. In early 1978, MG Richard H. Thompson, then Commander, US Army Troop Support and Aviation Materiel Readiness Command, (TSARCOM) and Mr. Joseph P. Cribbins initiated a study to determine feasibility of placing selected Army helicopters as POMCUS in USAREUR. With the exception of the CH-47C (and now the UH-60A) helicopters were not self deployable and would take a large amount of air transport to meet early deploying division requirements. The study was entitled "Aviation Materiel Combat Ready In-Country (AMCRIC)" and had the objective of looking at potential alternatives toward having combat ready helicopters available in USAREUR to round out POMCUS for early deploying divisions.

b. The AMCRIC Study Plan was completed in October 1978 and the overall concept was discussed with General Blanchard at the time (TAB A). Subsequently, we received agreement from USAREUR that we should move out on this project. In May 1980, USA Logistics Evaluation Agency (LEA) was given the job of working in conjunction with USAREUR, FORSCOM, and TSARCOM to refine the AMCRIC concept and present to DA for approval. In May 1980, General Kroesen sent a message (TAB B) expressing his concern that he did not have any Army aviation in POMCUS. In the FY 82-86 Consolidated Guidance, OSD stated that for aviation equipment not suitable for conventional prepositioning, the Army should seek ways to minimize early lift demand, e.g. in peacetime maintain in forward deployed units some equipment needed by early reinforcing units.

c. In August 1980, the AMCRIC team visited USAREUR and a concept has now been defined in USAREUR message (TAB C). Key

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DALO-AV 0119521 20 NOV 1980
SUBJECT: Aviation Materiel Combat Ready In-Country (AMCRIC) Study -- DECISION MEMORANDUM

elements of the concept are:

(1) Combat ready helicopters and ancillary equipment will be stored in a humidity controlled environment (buildings or covers, buildings preferred) by Combat Equipment Group Europe (CEGE).

(2) Helicopters will be rotated every six months by serial number to designated sponsors among aviation units stationed in Europe; and will be replaced in storage by full mission capable helicopters, e.g., AH-1S for AH-1S.

(3) The first phase will be to place 21 AH-1S helicopters in storage during FY 1981. We plan to use 21 modified AH-1S now assigned to USAREUR which will be replaced by new production AH-1S. This phase will be used as a test bed to iron out problems and work on any unforeseen requirements prior to prepositioning a complete attack helicopter company.

(4) We plan to give priority to those aircraft that are not self deployable, e.g., AH-1S, OH-58, UH-1 - although we won't exclude CH-47 and UH-60 if we find that prepositioning these aircraft is needed and feasible.

d. Detailed allocation of missions and milestones under the above concept are shown at TAB D.

e. This memorandum has been coordinated with ODCSOPS, ODCSRDA and Comptroller of the Army, who concur.

3. Recommendation: That the AMCRIC concept for prepositioning selected Army aircraft in Europe be approved so that detailed programing and planning for resources and implementation can begin.

FOR THE DEPUTY CHIEF OF STAFF FOR LOGISTICS

Joseph P. Cribbins

JOSEPH P. CRIBBINS
Special Assistant to the Deputy
Chief of Staff for Logistics

4 Incl
TAB A-AMCRIC Study Plan
TAB B-Gen Kroesen msg
TAB C-USAREUR msg
TAB D-Missions and
Milestones

LTC Dick Thompson/70487
Typed by: C. Taylor

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SEE REVERSE

~~SECRET~~

APPENDIX I

ROUTINE

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*** UNCLASSIFIED ***
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DC853/05R038/2E8E - DT: 26C/2205

ACTION: COR SA XO DAAS SUP MAINT REMGT QUAL OMIS PAO USACC VISITS

INFO: COR SA XO DAAS SUP MAINT REMGT QUAL OMIS PAO USACC VISITS

RCTUZYUW RUFDAAA3098 2682231-UUUU--RUEMANA.
ZNR UUUUU
R 2810182 SEP 80
FM CINCUSAREUR HEIDELBERG GERMANY//AEAGD-WR-P//
TO RUEADWD/HQDA WASH DC//DALO-AV//
RUCLHTR/CDR FORSCOM FT MCPHERSON GA//AFLG-REA//
RUKLDAR/CDRDARCOM ALEX VA//DRCRE-TF/DRCPA-O//
INFO RUFLICA/CUSTIS SUPCOM KAISERSLAUTERN GERMANY//AERLO-WP//
RUFIOVA/CDRUSAGEUR MANNHEIM GERMANY//AERCF//
RUCIFRA/CDRTSARCOM STL MO//DRSTS-BAR//
RUEMANA/CDRNGAD NEW CUMBERLAND PA//DALO-LEP//
RUEPABF/CDRDESCOM CHAMBERSBURG PA//
RUEADWD/HQDA WASH DC//NGB-AVN/DALO-SMN/DAMO-RNN//
RUWTNBC/CDR CCAD CORPUS CHRISTI TX//SDSCC-MP//
BT
UNCLAS BB
SUBJECT: PREPOSITIONING OF AVIATION ASSETS (U)
A. DA MSG, DALO-AV, 1520Z7 JUL 80, SUBJECT: REQUEST FOR THEATER CLEARANCE. (NOTAL)
B. FORSCOM MSG, AFLG-REA, 2813ØØZ JUL 8Ø, SUBJECT: REQUEST FOR THEATER CLEARANCE. (NOTAL)
1. REF A AND B REQUESTED CLEARANCE FOR LISTED PERSONNEL TO VISIT

PAGE Ø2 RUFDAAA3098 UNCLAS BB
USAREUR FOR THE PURPOSE OF DISCUSSING THE POSITIONING OF AVIATION ASSETS IN POMCUS AND JOINTLY ARRIVING AT AN ACCEPTABLE CONCEPT AND PRELIMINARY IMPLEMENTATION PLAN.
2. FOLLOWING IS A SUMMARY OF GENERAL AGREEMENT ON CONCEPT OF STORING AVIATION ASSETS IN POMCUS, IMPLEMENTING RESPONSIBILITIES AND A PRELIMINARY IMPLEMENTING MILESTONE SCHEDULE ARRIVED AT BETWEEN YOUR REPRESENTATIVES AND THE USAREUR STAFF. USAREUR IS PREPARED TO BEGIN IMPLEMENTING USAREUR RESPONSIBILITIES UPON RECEIPT OF DA APPROVAL.
A. CONCEPT: THAT AVIATION ASSETS ASSIGNED TO POMCUS DEPLOYING UNITS WILL BE STORED IN OR CLOSE TO CURRENT POMCUS STORAGE SITES UNDER THE DIRECT RESPONSIBILITY OF THE COMBAT EQUIPMENT GROUP, EUROPE.
B. FOR DISCUSSION AND INITIAL IMPLEMENTATION OF THIS CONCEPT TWENTY-ONE COBRAS, OR ONE ATTACK HELICOPTER COMPANY, WERE ENVISIONED. THIS WAS NOT A BINDING AGREEMENT BUT SELECTED FOR USE IN ORDER TO BASE FURTHER DISCUSSION AND PLANNING. IT WAS UNDERSTOOD THAT THESE COBRAS WOULD INITIALLY BE AH-1S (MOD) AS PART OF THE USAREUR CHANGE OUT FOR FULLY MODERNIZED AIRCRAFT AND NOT RETURNED TO

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*** UNCLASSIFIED ***
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CONUS. EVENTUALLY, FULLY MODERNIZED AIRCRAFT WOULD BE ASSIGNED.

PAGE 03 RUFDAAA3098 UNCLAS &&

C. REDI-COVERS AND DEHUMIDIFIER ELEMENTS LISTED IN TSARCOM SUPPLY LETTER, SL4-80, 4 FEB 80, FOR THE AH-1 AIRCRAFT WOULD BE USED FOR PROTECTION IN STORAGE.

D. USAREUR AGREES TO:

(1) RECEIVE, STORE, MAINTAIN, ISSUE AS REQUIRED, MAINTAIN ACCOUNTABILITY, QUALITY ASSURANCE, POSITION PLL/ASL AND MAINTAIN DA FORM 1352.

(2) DETERMINE A "WARHEAD" LOCATION.

(3) COORDINATE EXERCISING OF AIRCRAFT WITH FORSCOM.

(4) ROTATE AIRCRAFT WITHIN USAREUR SO THAT NO AIRCRAFT WOULD REMAIN IN STORAGE CONFIGURATION LONGER THAN SIX MONTHS.

(5) DEVELOP RESOURCE REQUIREMENTS REQUIRED BY USAREUR (CEGE) FOR FY 81/82 (UNPROGRAMMED FYS).

(6) PREPARE A PARR ISSUE TO SUPPORT FUTURE RESOURCE REQUIREMENTS IN FY 84-87.

(7) ASSIST IN DEVELOPMENT OF MOU'S AND MAKE FINAL DETERMINATION OF PLL/ASL AS MAY BE REQUIRED.

E. FORSCOM AGREED TO:

(1) DETERMINE AND PROVIDE TO USAREUR AIRCRAFT PLL/ASL REQUIREMENTS.

PAGE 04 RUFDAAA3093 UNCLAS &&

(2) COORDINATE EXERCISING OF AIRCRAFT WITH USAREUR.

(3) ASSIST IN DEVELOPMENT OF MOU'S AS MAY BE REQUIRED.

F. TARCOM AGREED TO:

(1) PROVIDE REDI-COVERS AND DEHUMIDIFICATION EQUIPMENT.

(2) ASSIST IN MAINTENANCE SUPPORT.

(3) POSSIBLE USE OF AVCRADS FOR HANDS-ON MAINTENANCE REQUIREMENTS. (MAYBE TOO FAR IN THE OUT-YEARS)

(4) POSSIBLE USE OF MAINTENANCE PERSONNEL FROM CCAD IF FULLY FUNDED. (THIS ALTERNATIVE OFFERS A CHANCE OF MEETING AN EARLY COMMITMENT ON POSITIONING OF AIRCRAFT WITH MAINTENANCE PERSONNEL ON BOARD WITH THE AIRCRAFT. SINCE PERSONNEL FROM CCAD ARE INDUSTRIALLY FUNDED, THEIR USE WOULD REQUIRE PAYMENT OF WAGES, TDY AND TRANSPORTATION. THIS ALTERNATIVE WILL BE INCLUDED IN DEVELOPING RESOURCE REQUIREMENTS).

G. DA REPRESENTATIVE AGREED TO:

(1) PRESENT AIRCRAFT POSITIONING CONCEPT TO DA STAFF FOR APPROVAL.

(2) INFORM DA STAFF THAT THERE WILL BE RESOURCE

REQUIREMENTS INVOLVING DOLLARS, PERSONNEL, EQUIPMENT AND TOOLS.

PAGE 05 RUFDAAA3098 UNCLAS &&
USAREUR WILL DEVELOP THESE RESOURCE REQUIREMENTS FOR SUBMISSION TO DA.

(3) INFORM DA STAFF THAT RESOURCE REQUIREMENTS ARE UNPROGRAMMED AND UNFUNDED FOR FY'S 81 AND 82 AND THAT RESOURCES MUST BE PUSHED TO USAREUR IF PROGRAMS TO BE INITIATED IN FY 81 AND CONTINUED IN FY 82. (USAREUR WILL SUBMIT A PARR ISSUE FOR FY 83-87).

(4) PRESENT THE 21 AIRCRAFT INITIAL STORAGE CONCEPT.

(5) PRESENT ANY ADDITIONAL AIRCRAFT POSITIONING POSSIBILITIES CONCERNING UH 58'S AND UH-1'S FOR OUT YEARS ON WHICH USAREUR COULD BASE PLANNING, PARTICULARLY FOR FY 83-87.

(6) PROVIDE USAREUR WITH DA GUIDANCE ON CONCEPT, RESOURCES, AND POSITIONING OF AIRCRAFT IAW WITH RECOMMENDED MILESTONES LISTED BELOW.

H. MILESTONES (PROJECTED FOR PLANNING)

(1) 30 NOV 80 - DA APPROVAL OF STORAGE CONCEPT AND PROVIDE USAREUR PROGRAMMED NUMBER OF AIRCRAFT (BY TYPE) BY YEAR (FY 83-87).

(2) 15 JAN 81 - USAREUR DETERMINATION OF RESOURCE

REQUIREMENTS.

PAGE 06 RUFDAAA3098 UNCLAS &&

(3) 15 JAN 81 - USAREUR DETERMINATION OF "WARMBASE" LOCATION.

(4) 15 JAN 81 - USAREUR PREPARATION OF FY 83-87 PARR ISSUE ON RESOURCE REQUIREMENTS.

(5) 30 JAN 81 - DA PROVIDE RESOURCES REQUIRED TO USAREUR TO SUPPORT AIRCRAFT POSITIONING IN FY 81.

(6) 28 FEB 81 - OARCOM PROVIDE REDI-COVERS AND UH MACHINES.

(7) APR 81 (SW 81) - BEGIN INPUT OF AIRCRAFT.

(8) TBD - DEVELOP AND COMPLETE MOU'S BETWEEN MACOMS AS REQUIRED.

4. USAREUR IS PREPARED TO POSITION AIRCRAFT IN POMCUS IF RESOURCES CAN BE PROVIDED TO ACCOMPLISH THE MISSION AND DETERMINATION OF POSITIONING. RESOURCES ARE CRITICAL TO THE PROGRAM AND USAREUR WILL DEVELOP SUCH REQUIREMENTS FOR SUBMISSION TO DA NLT 15 JAN 81. USAREUR IS ALSO PREPARED TO DEVELOP PLANS AND PROCEDURES FOR MAINTENANCE AND SCHEDULED ROTATION OF AIRCRAFT WITHIN USAREUR SO THAT NO AIRCRAFT IS IN STORAGE LONGER THAN SIX MONTH. THESE PLANS AND PROCEDURES WILL BE PROVIDED TO DA.

5. POC, THIS HQ IS MR EARL N. ERICKSON, AEAGD-WR-P, AUTOVON 435-6970/8328.

BT #3098 NNNN

APPENDIX J

ROUTINE

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10720/101064/3650 - DT: 365/1735

LSDT

ACTION: CDR CEA XO DAAS SUP MAINT REMGT QUAL DMIS PAO USACC VISITS

INFO: CDR CEA XO DAAS SUP MAINT REMGT QUAL DMIS PAO USACC VISITS

RTTUZYUW RUEADWD9488 3651727-UUUU--RUEMANA.
ZNR UUUUU
R 301604Z DEC 80
FM HQ DA WASHDC//DALO-AV//
TO RUFOAAA/CINCUSAREUR HEIDELBERG GER //AEAGD-WR-P/AEAGC-AV/AEAGD-CM
INFO RUCLHTB/CONUSAFORSCOM FT MCPHERSON GA //AFLG-REA//
RUKLDAR/CDRUSAUARCOM ALEX VA //DRCRE-TF/DRCPA-O//
RUFLICB/CDR 21ST SUPCOM KAISERSLAUTERN GER //AERLO-WP//
RUFDNMH/CDRUSACEGEUR MANNHEIM GER //AERCF//
RUCIFRA/CDR USATSARCOM STL MO//DRSTS-GAR//
RUEMANA/CDRUSALEA NCAD NEW CUMBERLAND PA //DALO-LEP//
RUEPABL/CDRUSADESCOM CHAMBERSBURG PA
RUWTNBC/CDRCCAD CORPUS CHRISTI TX //SDSCC-MP//
RUEADWD/HQ DA WASHDC//NGB-AVN/DAMO-ODR/DAMO-RQD/DAMA-WSA//
BT
UNCLAS
SUBJ: POMCUS FOR ARMY AVIATION
A. CINCUSAREUR MSG, AEAGC-AV, 021331Z FEB 79, SUBJ: AVIATION MATERIEL COMBAT READY IN COUNTRY (AMCRIC) STUDY, NOTAL.
B. CINCUSAREUR MSG, AEAGC, 101115Z MAY 80, SIGNED KROESEN: SUBJ: POMCUS FOR AVIATION AND AIR DEFENSE (U). NOTAL
PAGE 02 RUEADWD9488 UNCLAS
C. CINCUSAREUR MSG, AEGD-WR-P, 241018Z SEP 80, SUBJ: PREPOSITIONING OF AVIATION ASSETS.
D. HQDA MSG, DALO-AV, 031058Z OCT 80, SUBJ: PREPOSITIONING OF AVIATION ASSETS.
1. REF A GAVE USAREUR CONCURRENCE TO DEVELOPING A CONCEPT FOR PREPOSITIONING ARMY AVIATION ASSETS IN EUROPE.
2. REF B EMPHASIZED THE REQUIREMENT FOR POMCUS FOR AVIATION (AND ADA) AND RECOMMENDED AGGRESSIVE EXPLORATION OF MEANS TO IMPROVE PRESENT CAPABILITY.
3. REF C GAVE A SUMMARY OF GENERAL AGREEMENT ON STORING OF AVIATION ASSETS IN POMCUS, MODIFIED INITIAL PROPOSAL FOR PREPOSITIONING AVIATION ASSETS WITH OPERATIONAL UNITS AND ADVISED THAT USAREUR IS PREPARED TO POSITION AIRCRAFT IN POMCUS IF RESOURCES CAN BE PROVIDED AND METHOD OF PREPOSITIONING DETERMINED.
4. REF D AGREED WITH OVERALL CONCEPT CONTAINED IN REF C AND ADVISED THAT DA WOULD PROVIDE APPROVAL OF PREPOSITIONING CONCEPT ASAP.
5. CONCEPT APPROVAL HAS BEEN GIVEN FOR LIMITED EXECUTION OF THE PLAN TO PLACE AIRCRAFT IN POMCUS. THE TERM "POMCUS FOR ARMY AVIATION WILL BE USED TO IDENTIFY PREPOSITIONING OF AIRCRAFT IN EUROPE IN LIEU OF "AVIATION MATERIEL COMBAT READY IN COUNTRY (AMCRIC)" WHICH
PAGE 03 RUEADWD9488 UNCLAS
WAS THE TITLE OF THE ORIGINAL STUDY.

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6. REQUEST THAT USAREUR ACCOMPLISH THE FOLLOWING:

A. DEVELOP RESOURCES AND ASSISTANCE NEEDED TO PLACE 21 AH-1S COBRA/TOW IN AN EVALUATION OF THE FEASIBILITY OF POMCUS AS OUTLINED IN REF C.

B. DEVELOP THE REQUIREMENT IN THREE INCREMENTS, EACH CONSISTING OF ONE PLATOON OF SEVEN (7) AH-1S. DUE TO SHORTAGE OF ASSETS, IT MAY BE NECESSARY TO RUN THE EVALUATION WITH LESS THAN 21 AH-1S.

C. PLAN ON STORING THE AH-1S IN POMCUS FOR SIX (6) MONTHS WITH A FOLLOW-ON OPERATIONAL AND RAM EVALUATION OF NOT TO EXCEED 90 DAYS. THIS SHOULD PROVIDE US WITH SUFFICIENT DATA/INFORMATION TO CONFIRM VALIDITY OF THE POMCUS FOR ARMY AVIATION CONCEPT AND GIVE US THE BASIS FOR A DECISION ON PREPOSITIONING OTHER AVIATION ASSETS.

D. PLAN TO BEGIN INPUT OF AH-1S IN THE FIRST QUARTER FY 82. THIS SHOULD COINCIDE WITH TRADEOUT OF MODIFIED AH-1S WITH MODERNIZED AH-1S.

E. SUBMIT YOUR PLAN AND REQUIREMENTS TO DA BY 15 FEB 81. WE SUGGEST THAT YOU COMMUNICATE DIRECTLY WITH FORSCOM, DARCOM AND ANY OTHER COMMANDS/AGENCIES NEEDED WITH INFORMATION TO HQDA, DALO-AV.

7. HQDA POC IS LTC DICK THOMPSON, DALO-AV, AUTOVON 227-0487.

BT #9888 NNNN

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*** UNCLASSIFIED ***
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